

Warsaw Groundhog Days

Old Friends, Positions and Impasses Revisited All Over Again at the 2013 Warsaw Climate Conference

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1. Introduction

In what has become normal procedure at the international climate negotiations, the annual United Nations climate conference (the nineteenth Conference of the Parties (COP 19) to the United Nations Framework Convention on Climate Change (UNFCCC) and the ninth Conference of Parties serving as the Meeting of the Parties to the Kyoto Protocol (CMP 9)) this year once again seemed on the brink of collapse and concluded more than one day behind schedule, in the evening of Saturday 23 November. However, on most of the key issues it yielded little to show as result of the overtime work. Little was expected: The process that was launched in 2011 in Durban to develop a new comprehensive climate agreement is to conclude only in 2015, so the main "big picture" issue was to agree on a roadmap for the next two years. However, even here countries managed to disappoint expectations and agreed only on the bare minimum needed to move the process forward.

As last year, the start of the conference saw the Philippines being shattered by a super typhoon of unprecedented proportions. In September, the first part of the new assessment report by the Intergovernmental Panel on Climate Change (IPCC) posited that it is 95% certain that human influence is the dominant cause of global warming and that its impacts will likely be worse than previously thought.¹

Notwithstanding the increasingly dire warnings by climate science and actual climate impacts, the climate negotiations continue to be bereft of any sense of urgency. To the contrary, the conference's host Poland deemed it fit to organise a coal summit in parallel to the climate conference and Japan apparently thought that a climate conference was a good occasion to announce a substantial downgrade of its 2020 emission target, from -25% to about +3% compared to 1990 levels. Other industrialised countries had little more to brag about. The newly elected conservative Australian government is moving to dismantle the climate legislation put in place by the previous Labour government and the EU is incapable of increasing its 20% target for 2020 even though it has already been achieved. Taking into account offsets surrendered in the EU ETS, the EU in 2012 in fact accounted for emission reductions of 27% below 1990 levels. If it does not increase its target, the EU can thus be expected to amass a substantial surplus of emission units. This lack of industrialised country leadership made it easy for some emerging economy countries to dig in their heels on the substantive issues of the 2015 agreement.

Climate Change 2013: The Physical Science Basis. Working Group I Contribution to the IPCC 5th Assessment Report, Final Draft Underlying Scientific-Technical Assessment. Online at http://ipcc.ch/report/ar5/wg1/, last accessed 13 December 2013.

² Sandbag: EU climate policy outpaced by emissions reductions, 9 October 2013. Online at http://www.sandbag.org.uk/blog/2013/oct/9/eu-climate-policy-outpaced-emissions-reductions/, last accessed 12 December 2013.

This report lays out the main developments in Warsaw and assesses the main outcomes. It starts with the discussions under the Durban Platform on developing a new comprehensive climate agreement by 2015 and increasing short-term ambition and subsequently covers the issues relating to near-term implementation of previous decisions in the areas of emission reductions and transparency, adaptation, loss and damage, finance and technology.

2. ADP Workstream 1 - Negotiating a New Climate Agreement

2.1 Roadmap to Paris

After the failure of the 2009 Copenhagen conference, countries decided at the 2011 conference in Durban to make a new attempt to develop a comprehensive climate agreement. The Ad Hoc Working Group on the Durban Platform for Enhanced Action (ADP) aims to develop a new agreement "applicable to all", which is to be adopted in 2015 and to be implemented from 2020.

However, a clear roadmap for the process had so far been lacking, in particular for how to determine how exactly countries are going to participate in the new agreement. Questions here are whether countries will adopt legally binding commitments or not, differentiation among countries, and whether countries may determine the form and ambition of their participation purely nationally or whether participation is to be negotiated internationally.

The traditional industrialised countries (listed in Annex I of the UN Framework Convention on Climate Change) have been keen to break down the so-called "firewall", the clear distinction between Annex I and non-Annex I countries (the traditional "developing countries") that is laid down in the Framework Convention of 1992. They argue that this distinction is outdated since many non-Annex I countries are nowadays wealthier than many of the traditional industrialised countries and that their contribution to global emissions has also grown rapidly. While traditionally legally binding commitments have been expected only from Annex I countries, they now demand that all countries, in particular the economically more advanced countries of the global South, should be on the same legal footing in the new agreement, though not necessarily with the same type of commitments. That is, the legal status should in their view be the same for everyone though the contents may differ among countries.

In the past, developing countries united in the "Group of 77 and China", a strong negotiating alliance that allowed developing countries to speak with one voice. While

the Group of 77 and China still exists formally, developing countries have, however, started organising themselves and communicating in a more differentiated manner in recent years. This trend continued also in Warsaw. Some non-Annex I countries, in particular the new "Independent Alliance of Latin America and the Caribbean" (AILAC), which was formed in 2012 by Chile, Colombia, Costa Rica, Guatemala, Panama and Peru, have staked out an ambitious position and argue that all countries should contribute their fair shares. The countries that are most vulnerable to the impacts of climate change, Alliance of Small Island States (AOSIS) and the least developed countries (LDCs) have also been pushing all major emitters to take stronger action. Others, however, in particular the "group of like-minded developing countries (LMDCs)", which includes China and India, some other Asian countries such as Pakistan and the Philippines, OPEC countries such as Saudi Arabia as well as the leftleaning Latin American countries such as Bolivia and Venezuela, have so far strongly resisted any explicit or implicit dissolution of the traditional distinction between the Annexes. They have maintained that Annex I countries should continue to take the lead since they are the ones who caused the climate problem, even nowadays have much larger economic resources to do something about it, and have in the view of these countries so far mostly failed to do their homework in terms of reducing their own emissions and in providing support to non-Annex I countries.

In Warsaw, they therefore strongly defended the view that only Annex I countries should adopt legally binding commitments, while only "enhanced actions" should be demanded from non-Annex I countries. When the co-chairs of the ADP produced a draft text that referred to commitments from all Parties, they insisted on inserting references to Article 4 of the Framework Convention, which delineates the binary historical differentiation between Annex I and non-Annex I and in particular conditions the extent to which non-Annex I countries will fulfil their commitments to the extent to which Annex I countries fulfil their commitments regarding the provision of finance and technology. In particular the USA has been adamant in its position that it will not accept a continuation of this issue linkage in the 2015 agreement.

The LMDCs also strongly objected to any notion that the actions of non-Annex I countries should be in any way assessed internationally. Annex I countries as well as many non-Annex I countries were in favour of setting an early deadline for the international submission of initial offers in order to provide sufficient time to countries to assess and negotiate each other's offers. One of the problems of the Copenhagen process had been that many countries had put their pledges on the table only one or two months before the conference. Based on this experience many countries have been keen to avoid a repetition of this situation. Many Annex I and non-Annex I countries were also in favour of first defining requirements for which information countries would have to submit along with their initial offers in order to provide transparency on the actual content of the offers.

Many Annex I and non-Annex I countries also supported the establishment of an international process to assess whether countries' initial offers actually represented their fair shares and would add up to the globally required level of ambition. However, the LMDCs maintained that any such process of assessing offers should only apply to Annex I countries but not to non-Annex I countries.

Ironically, this issue in particular hinged on the principles of equity and common but differentiated responsibilities and respective capabilities that are laid down in the Convention. One of the key fights on the wording of the Durban Platform decision in 2011 had been on the question of whether to include explicit references to these principles or not. In particular the US had been opposed as it saw them as a Trojan Horse to maintain the "firewall" while India had been the fiercest advocate of including references.

In Warsaw, however, it was in particular India that was opposed to establishing a process to try to fill these principles with concrete meaning. India and the other LMDCs strongly put forward historical responsibility as the overriding criterion. Under the Subsidiary Body for Scientific and Technological Advice (SBSTA), Brazil, not a member of the LMDCs but strongly supported by them and by the G-77 as a whole, had submitted a new version of its old Brazilian proposal that would determine countries' emission reduction contributions on the basis of their historical contribution to global temperature increase. Brazil proposed to request the IPCC to develop a methodology to quantify each country's historical responsibility. As in the past, Annex I countries rejected this approach as too simplistic and many non-Annex I countries also argued in favour of a more multi-dimensional approach. The African group, for example, proposed to develop an equity reference framework including not only responsibility but also other indicators such as capability and development need to identify countries' fair shares. But India objected to any mentioning of an equity reference framework.

In the end, countries only agreed on the bare minimum necessary to move the process forward. Countries are now invited "to initiate or intensify domestic preparations for their intended nationally determined contributions, without prejudice to the legal nature of the contributions". These intended contributions are supposed to be communicated "well in advance" of the 2015 COP, "by the first quarter of 2015 by those Parties ready to do so", and "in a manner that facilitates the clarity, transparency and understanding of the intended contributions". The ADP is to identify the information that countries will provide accompanying their intended contributions, but only by the 2014 COP in Lima, which takes place in December of next year.³

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Decision -/CP.19, Further advancing the Durban Platform, Advance unedited version. Online at http://unfccc.int/files/meetings/warsaw_nov_2013/decisions/application/pdf/cop19_adp.pdf, last accessed 12 December 2013.

2.2 Building Blocks of the New Agreement

In addition to the overarching architecture issues, Parties also addressed the individual building blocks of the new agreement. One area of contention was whether to include "indicative elements of the 2015 agreement" or a "non-exhaustive list of areas for further reflection" as an annex to the decision or conclusions. While many Annex I non-Annex I countries were in favour of capturing progress made in such a list, others argued that such a list would need to be negotiated and that there was not enough time. The list was ultimately deleted.

Regarding substance, developing countries stressed that not only mitigation but also adaptation needed to be a core element and emphasised the importance of funding. Parties also exchanged views on the role existing institutional adaptation arrangements could play and on how ongoing processes could be used in the new agreement. Several developing and developed countries stressed that the process on national adaptation plans should be a key element for adaptation in the new agreement. Different positions emerged, however, with regard to the proposal made by the African Group to set a global goal for adaptation based on the estimated costs for adaptation needs in different emission scenarios. While several developing countries stressed the need to establish such a goal, developed countries raised significant concerns with this approach. The United States, for instance, questioned the possibility to globally add up location and sector-specific adaptation costs, and raised general concerns that such a global goal might potentially undermine mitigation ambition. In its final decision, the Conference of the Parties requests the ADP to elaborate elements for a draft negotiating text by building on these discussions at the next ADP meeting in 2014.

Non-Annex I countries also generally called for a scale-up of public climate finance and for a strengthening of the measuring, reporting and verification of the provision of support. They also emphasised that the finance part of the new agreement should have the same legal force as the other parts and that there should be aggregate and individual finance targets for Annex I countries, and a clear roadmap for the scale-up of finance, with the 100 billion USD promised for 2020 as the starting point. Annex I countries for their part posited that which parts of the new agreement were to be binding was yet to be determined and re-iterated their view on the importance of enabling environments within countries to mobilise public and private finance flows. Annex I countries also called for "strengthening the donor base", that is, they called for more countries in addition to the traditional donors to become providers of climate finance. Non-Annex I countries strongly pushed back against these suggestions, arguing that provision of support by industrialised countries was a commitment laid down in the Convention while South-South cooperation was of an altogether different character and purely voluntary.

On technology, non-Annex I countries called for the identification of finance to support technology transfer, for a link of the technology mechanism to the financial mechanism,

and in particular for a dedicated technology window within the Green Climate Fund. They also stressed the necessity to remove barriers to technology transfer, including intellectual property rights (IPR). Annex I countries for their part reiterated their traditional view that IPR were critical to foster innovation, were not main barrier to technology transfer, and that this issue was anyhow already being addressed in other fora.

All countries in general agreed on the need to enhance transparency but here as well there continued to be a clear fault line between Annex I and non-Annex I countries. While Annex I countries want to align requirements for all countries as much as possible, in particular the LMDCs pushed back, arguing that attempts to develop common accounting rules would delay action and progress. Non-Annex I countries also called for more transparency on the provision of support.

3. ADP Workstream 2 - Enhancing Short-Term Ambition

Alongside the new climate agreement to be adopted in 2015, the ADP's Workstream 2 discusses measures to increase the short-term ambition of mitigation measures. This workstream was established in Durban as the level of ambition of the mitigation pledges countries have made for the time until 2020 is far below what would be necessary to achieve the agreed goal of keeping global warming below 2°C. The United Nations Environment Programme's annual "Emissions Gap Report" estimates the gap between the current level of ambition and what is necessary at 8-12 gigatonnes of CO2-eq. It was also part of a balanced agreement: Workstream 2 has been considered by most developing countries as an essential stepping stone for the development of a new climate regime under Workstream 1. In their view, raising the level of ambition for pre-2020 under Workstream 2 has to be done within the existing Annex structure of the UNFCCC with all its implications: Annex I countries are required to lead and to support any mitigation action by Non-Annex I parties with finance, technology and capacity building, often referred to as "means of implementation". Under this premise, Japan's announcement to drastically reduce the ambition of its 2020 commitment from -25% to +3.1% as compared to 1990 levels⁵, had a devastating effect on the negotiation dynamics.

⁴ United Nations Environment Programme (UNEP), The Emissions Gap Report 2013. Online at http://www.unep.org/publications/ebooks/emissionsgapreport2013/, last accessed 6 December 2013.

⁵ Climate Action Tracker (2013). Japan reverses Copenhagen pledge, widens global emissions gap, nuclear shutdown not to blame. Online at: http://climateactiontracker.org/news/147/Japan-reverses-Copenhagen-pledge-widens-global-emissions-gap-nuclear-shutdown-not-to-blame.html, last accessed 3 December 2013.

The sorrow on the side of developed country mitigation was not relieved by strong and clear support for developing country mitigation. The picture of the available support for mitigation action in developing countries is a mixed one. Financial support for NAMAs is becoming available, however, there is still a lack of coordination of the donors and on the receiving end. According to donors the information available on the NAMA registry is not sufficient to allow for making decisions to select and support a particular NAMA. At the same time developing countries stated that the information templates required for the NAMA registry are extremely complex. Given that the GCF as the intended main channel of multinational support is still not operating, some developing countries have been hesitant to enter proposals into the NAMA registry and have instead sought for bilateral support. The British-German NAMA Facility is one of the most advanced actors in the field. At a side-event in Warsaw the NAMA Facility presented its first achievements. In a first tranche of EUR 70 million the Facility granted support to five selected NAMAs in Chile, Colombia, Costa Rica, Indonesia and Mexico. These are however only five of the 47 NAMAs that applied.⁶ The high number of applications to the NAMA Facility illustrates the interest of many developing countries in going forward with their proposed NAMAs.

Given the continued uncertainty on the future availability of funding and the still not operational Green Climate Fund, developing countries have been hesitant to further increase their ambition under Workstream 2 and instead repeatedly insisted on improving the means of implementation. Developing countries demanded a clear roadmap to scale up climate finance to the 100 billion USD promised for 2020, with a milestone of 70 billion USD to be achieved in 2016. As in Workstream 1, developing country Parties also reiterated their call for discussions on IPRs and patents to be made available to developing countries, however, without creating much resonance from their developed country counterparts.

In the run-up to the Warsaw summit Nauru had submitted a detailed proposal on behalf of the Alliance of Small Island States (AOSIS). AOSIS proposed to establish a "Warsaw Workplan" to identify and evaluate different technological and policy options to abate greenhouse gas emissions at a technical level, with a view to subsequently implement these options on a larger scale. A specific focus was to be laid on options to increase the deployment of renewable energies and increase energy efficiency.⁷ The proposal received positive feedback from many industrialized countries including the

⁶ Side Event: Financing the implementation of transformational NAMAs through the International NAMA Facility. held on Friday 15 November 2013 at the National Stadium in Warsaw during UNFCCC COP19.

AOSIS 2013. Submission by the Republic of Nauru on behalf of the Alliance of Small Island States (AOSIS) - Information, views and proposal from Parties and observer organizations on actions, initiatives and options to enhance ambition, including through the workplan on enhancing mitigation ambition, and on further activities for its plan of work in 2014 and proposals for a more balanced, focused and formal mode of work indicated in paragraphs 5 and 6 of the ADP conclusions. 1 September 2013. Online at

http://unfccc.int/files/documentation/submissions_from_parties/adp/application/pdf/adp_aosis_workstre am_2_20130911.pdf, last accessed 12 December 2013.

United States and the EU. These parties also reiterated their previous proposals to develop so-called 'international cooperative initiatives'. Under these initiatives a number of mitigation options could be leveraged. In addition to the afore-mentioned renewable energy and energy efficiency measures, the most intensively discussed options are phase-out of fossil fuel subsidies, reduction of emissions from international bunker fuels (that is, international aviation and shipping), and regulation of fluorinated hydrocarbons (HFCs) under the Montreal Protocol on Substances that Deplete the Ozone Layer. To facilitate discussions, the UNFCCC Secretariat had prepared a detailed technical paper on options to enhance mitigation.⁸

Nonetheless, the only cooperative initiative that moved forward in Warsaw was the promotion of mitigation (and adaptation) activities by cities and other subnational authorities. During the Warsaw talks an in-session workshop was held on urbanisation and the role of sub-national governments in facilitating climate action in cities. This workshop focussed on urban transportation and efficient buildings. The workshop was well regarded and parties expressed their interest in continuing the work in this field. Consequently the ADP agreed to "convene [...] a forum to help share among Parties the experiences and best practices of cities and subnational authorities in relation to adaptation and mitigation" in June 2014.⁹

Despite the positive feedback from many developed countries, other more concrete mitigation work programmes did not go forward. Developing countries, specifically the LMDCs, highlighted repeatedly that increased ambition in the pre-2020 period must be realized under the UNFCCC in accordance with the Convention's principles and not through yet another technical process. Two important arguments are reflected in this statement: Firstly, developing countries accused developed countries of seeking to engage in these international cooperative initiatives mainly to excuse themselves from inaction in terms of more ambitious mitigation commitments. Secondly, they viewed these proposals as an attempt to shift the responsibility for additional mitigation to developing countries and to further dilute the differentiation between Annex I and Non-Annex I countries already for the period before the new agreement enters into force. Developing countries therefore repeatedly called on developed countries to increase their emission reduction commitments to -40% below 1990 levels, arguing that this would be sufficient to close the mitigation gap. Due to these reservations it was not possible to agree on a concrete work plan. Instead, Parties agreed to convene technical expert meetings at the next session of the Subsidiary Bodies to the Convention in June 2014.

One option for additional mitigation where progress seemed possible in the run-up to Warsaw was regulating HFCs under the Montreal Protocol. This option has been

Updated compilation of information on mitigation benefits of actions, initiatives and options to enhance mitigation ambition, FCCC/TP/2013/8, 30 October 2013.

Onclusions proposed by the Co-Chairs as adopted by the ADP, Advance unedited version. Online at http://unfccc.int/files/bodies/awg/application/pdf/adp_conclusions_as_adopted.pdf, last accessed 12 December 2013.

discussed for several years now and under various fora. In June an agreement between the United States and China to work together on phasing out HFCs made the news, ¹⁰ and there was a similar agreement at the G20 summit in September 2013. However, at the most recent Meeting of the Parties to the Montreal Protocol (MOP25: 21-25 October 2013) it was not possible to make substantial progress on the issue and the same dividing lines appeared in Warsaw. A number of Parties, including India and Saudi Arabia, strongly opposed a paragraph which invited "other relevant multilateral fora to cooperate in the phasing down of the production and consumption of hydrofluorocarbons." Hence, it was not possible to come to a consensus on this proposal and it is not mentioned in the final conclusion.

All in all, the negotiations under the ADP's Workstream 2 did not deliver substantial progress in Warsaw. The lowest common denominator that parties agreed to is to continue the discussion on how to increase the level of ambition for pre-2020 mitigation at a ministerial meeting on the occasion of the meeting of the subsidiary bodies to the UNFCCC in June 2014. A ministerial meeting of the Parties to the Kyoto Protocol had already been scheduled before and will now be amended to include high-level representatives of countries that are not a party to the Kyoto Protocol.

A little surprising is the invitation to parties to voluntarily cancel certified emission reductions generated under the Clean Development Mechanism as a means to close the mitigation gap.

4. Measuring, Reporting and Verification

4.1 Annex I MRV

As more and more key industrialised countries are dropping out of the Kyoto Protocol it becomes increasingly important that MRV rules under the UNFCCC are environmentally sound and stringent. At COP 16 and 17 in Cancún and Durban Parties had agreed to enhance Annex I national communications and to additionally require biennial reports outlining progress in achieving emission reductions and the provision of support to non-Annex I countries.

In Warsaw, two decisions relevant to MRV of Annex I countries were taken, on:

White House Press Office (2013): United States and China Agree to Work Together on Phase Down of HFCs. Press Release. 8 June 2013. Online at http://www.whitehouse.gov/the-press-office/2013/06/08/united-states-and-china-agree-work-together-phase-down-hfcs, last accessed 3 December 2013.

- the "Revision of the UNFCCC reporting guidelines on annual inventories for Parties included in Annex I to the Convention", and
- the "Work programme on the revision of the guidelines for the review of biennial reports and national communications, including national inventory reviews, for developed country Parties".¹²

Reporting guidelines on annual inventories

COP 17 had adopted a revision of the previously existing guidelines for a trial period and in 2013 Parties reported on their experience with using the new guidelines and suggested a number of improvements. The Warsaw conference on this basis adopted revised guidelines for the preparation of national communications by Annex I Parties.¹³ These include: UNFCCC reporting guidelines on GHG inventories, revised common reporting format (CRF) tables and global warming potential values. These guidelines have to be used for the preparation of Annex I Parties' inventories from 2015 on. Voluntarily the new IPCC methods on wetlands were included, which provides the basis to report on wetlands in a transparent and common format.

Review of biennial reports and national communications

As the guidelines for GHG inventories were revised, it also became necessary to subsequently revise the guidelines for the review process. In Warsaw, guidelines for the technical review of information reported in GHG inventories, biennial reports and national communications by Annex I countries were adopted.¹⁴

From an MRV perspective it was important to come to an agreement and establish guidelines to be used for the review of the first biennial reports, starting in 2014.

Important to note is the decision that in those years when only biennial reports are to be reviewed, there will be a "centralised review" in Bonn. Whereas only in those years when national communications are to be reported, the review will be an in-country review. This decision is beneficial from the perspective of keeping efforts for MRV reasonable.

¹⁴ CRF review work programme, supra note 12.

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Decision -/CP.19, Revision of the UNFCCC reporting guidelines on annual inventories for Parties included in Annex I to the Convention, advance unedited version. Online at http://unfccc.int/files/meetings/warsaw_nov_2013/decisions/application/pdf/cop19_inv_rep_gdln.pdf, last accessed 12 December 2013.

Decision -/CP.19, Work programme on the revision of the guidelines for the review of biennial reports and national communications, including national inventory reviews, for developed country Parties, advance unedited version. Online at http://unfccc.int/files/meetings/warsaw_nov_2013/decisions/application/pdf/cop19_review_crf.pdf, last accessed 12 December 2013.

¹³ Annex I reporting guidelines revision, supra note 11.

4.2 Non-Annex I MRV

Related to MRV for non-Annex I countries two issues were negotiated in Warsaw:

- 1. The continuation and revised terms of references for the Consultative Group of Experts (CGE) on non-Annex 1 national communications, ¹⁵ and
- 2. the composition of the team of technical experts under international consultation and analysis (ICA).¹⁶

4.3 Non-Annex I NatCom – Consultative Group of Experts

The Consultative Group of Experts (CGE) on National Communications from non-Annex I Parties aims at improving the process of and preparation of national communications and biennial update reports by providing technical support and advice. In Warsaw the terms references of the CGE have been revised, mainly to include biennial update reports into the scope of the CGE. Most importantly it was decided that the work of the CGE is to be continued for five years (2014-2018) – which is an improvement over Doha were the decision had only been to continue the work for one year.¹⁷ Thus the CGE can now develop a work program for the next five years.

4.4 Teams of technical experts for International Consultation and Analysis (ICA)

The ICA process is one of the innovations developed as part of the Bali process. So far the national communications of developing countries have not been subject to international scrutiny and there was also no requirement to submit them at particular intervals. As part of the Cancún Agreements Parties resolved to require submission of non-Annex I national communications every four years as well as submission of biennial update reports every two years, and to conduct a "non-intrusive" process of international consultation and analysis. The decision on the "Composition, modalities and procedures of the team of technical experts (TTE) under international consultations and analysis" was a left-over from Doha, were only a draft decision text had been forwarded to the Subsidiary Body for Implementation at its thirty-eighth session in Warsaw. With the decisions taken this year, the ICA process is operational.¹⁸

¹⁸ ICA teams of experts, supra note 16.

Decision -/CP.19, Work of the Consultative Group of Experts on National Communications from Parties not included in Annex I to the Convention, advance unedited version. Online at http://unfccc.int/files/meetings/warsaw_nov_2013/decisions/application/pdf/cop19_cge_natcom_nai.pdf, last accessed 12 December 2013.

Decision -/CP.19, Composition, modalities and procedures of the team of technical experts under international consultation and analysis, advance unedited version. Online at http://unfccc.int/files/meetings/warsaw_nov_2013/decisions/application/pdf/cop19_tte_ica.pdf, last accessed 12 December 2013.

¹⁷ Non-Annex-I NatCom, supra note 15.

The most important issue in Warsaw was the decision on the composition on the teams of technical experts. Controversies revolved around which experts were to conduct the technical analysis foreseen as part of the ICA. The conference ultimately agreed that:

- Each TTE shall be led by two chairs: one from an Annex I and another from a non-Annex I Party.
- The overall composition of the TTEs shall be such that the majority of experts come from non-Annex I Parties.

5. Nationally Appropriate Mitigation Actions

One of the key elements of the Bali Action Plan was the provision that non-Annex I countries are to undertake "nationally appropriate mitigation actions (...) in the context of sustainable development, supported and enabled by technology, financing and capacity-building, in a measurable, reportable and verifiable manner". ¹⁹ Many countries submitted lists of NAMAs under the Copenhagen Accord and the Cancún Agreements. In addition, COP 16 and COP 17 decided that NAMAs can be submitted through a web-based registry to record mitigation actions and information and support.

In Warsaw, both formal decisions on NAMAs as well as other information provided in the negotiations and COP side events confirmed a growing consensus that NAMAs are to be developed and defined via a bottom-up process – and not via strict UNFCCC decisions. Based on the three cornerstones of NAMAs (contribution to mitigation, in the context of sustainable development and being MRVable) a concept emerges of what constitutes a NAMA in both informal and UNFCCC driven processes. However, not a single criterion exists which would prohibit a country from calling any mitigation action a NAMA if it wishes to do so. This is in line with the voluntary nature of NAMAs and the general intention to raise mitigation ambition through a deliberately wide range of nationally appropriate actions.

Such as the "Workplan to further the understanding of the diversity of NAMAs", FCCC/SBI/2013/L.8.
 Online at http://unfccc.int/resource/docs/2013/sbi/eng/l08.pdf, last accessed 12 December 2013.

¹⁹ Decision 1/CP.13, Bali Action Plan, FCCC/CP/2007/6/Add.1, 14 March 2008.

5.1 NAMA registry

Building on a previous version, prior to the COP a new and now webbased prototype of the NAMA registry was launched by the UNFCCC secretariat.²¹ It is clearly not the intention of the registry to serve as an MRV tool,²² but

- to give guidance and support in the NAMA development process, especially for those NAMAs which seek international funding,
- to provide information on NAMAs in preparation as well as those already being implemented contributing to a better picture on the diversity of NAMAs,
- to provide a platform for developing countries to demonstrate their mitigation activities.

It is fully voluntary which activities developing countries choose to announce in the registry and which kind of information they provide on registered NAMAs.

5.2 MRV of domestic NAMAs

The Doha conference had agreed to develop guidelines for MRV of domestically supported NAMAs, that is, NAMAs that do not receive international support. Nonetheless, in 2013 a number of non-Annex I countries continued to dispute the need for such guidelines. While Annex I countries as well as some non-Annex I countries have been keen to maximise the provision of information, other non-Annex I countries have been concerned about minimising the extent of international intrusion.

The decisions on the "guidelines for domestic measurement, reporting and verification of domestically supported nationally appropriate mitigation actions by developing country Parties" confirm the view that MRV of domestic NAMAs is fully at the discretion of the respective countries.

The principle of the guidelines is that they are "general, voluntary, pragmatic, non-prescriptive, non-intrusive and country driven". Parties are invited to use the guidelines on a voluntary basis. Factually the information / guidance given on how to set up MRV systems for domestic NAMAs are minimal in content.

²¹ UNFCCC NAMA registry. Online at http://www4.unfccc.int/sites/nama/SitePages/Home.aspx.

²² see Röser et al. (eds.) (2013): Annual Status Report on NAMAs. Online at: http://www.ecofys.com/files/files/mitigation-momentum-annual-status-report-2013.pdf, last accessed 12 December 2013.

Decision -/CP.19, General guidelines for domestic measurement, reporting and verification of domestically supported nationally appropriate matigation actions by developing country Parties, advance unedited version. Online at https://unfccc.int/files/meetings/warsaw_nov_2013/decisions/application/pdf/cop19_domestic_mrv.pdf, last accessed 12 December 2013.

This falls in line with the general view described above that NAMAs should be developed bottom-up and although good MRV is generally considered important, the development and implementation of NAMAs should not be hindered by formal MRV requirements.

5.3 NAMA Guidebook

UNFCCC, UNEP and UNDP published a common NAMA guidebook, which was presented at a side-event in Warsaw. Although it is obviously not an official document, it gives good insight what the general thinking on NAMAs currently is. The title in itself: "Guidance for NAMA design – building on country experiences" again reiterates the bottom-up nature of the NAMA concept.²⁴

Reducing Emissions from Deforestation and Forest Degradation

After eight years of intense discussions, in Warsaw Parties were able to finalise a package of decisions on a programme for the protection, conservation and rehabilitation of forests, resulting in the so-called "Warsaw Framework for REDD+²⁵ Action". Deforestation and forest degradation account for about 1/5 of global CO₂ emissions but had historically not been tackled within the UNFCCC.

Negotiations in Warsaw were able to build on significant progress achieved at the climate talks in Bonn in June 2013 as well as on discussions in workshops held throughout the year. This allowed Parties not only to reach agreement on the question of financing but it was also possible to agree on a number of methodological issues. With these decisions, seven in total, the conditions under which developing countries can access results-based payments for emission reductions achieved in the forestry sector have been established.

Negotiations were held in three different fora: While methodological issues were discussed under the SBSTA, there was a joint SBI/SBSTA work programme on institutional arrangements and a COP work programme on results-based finance. The discussions on methodological issues had already made considerable progress in the SBSTA negotiations held in Bonn in June 2013. With the SBI being blocked due to

Søren E. Lütken et.al. (2013): Guidance for Nama Design - Building on Country Experiences. Online at http://unfccc.int/files/cooperation_support/nama/application/pdf/guidance_for_nama_design_%282013 %29_final.pdf, last accessed 12 December 2013.

²⁵ REDD+: "Reducing emissions from deforestation and forest degradation and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries".

Russia's, Belarus' and Ukraine's reluctance to adopt the agenda, additional time could be spent in the SBSTA negotiations. This had not only allowed to rebuild trust among Parties but also led to agreement on three draft decisions that were adopted by the COP in Warsaw, namely on National Forest Monitoring Systems (NFMS)²⁶, on provisions regarding the timing and frequency by which REDD+ countries are to present a summary of the information on how social and environmental safeguards are being addressed and respected,²⁷ and on drivers of deforestation and forest degradation.²⁸ In addition, progress was made on the question of how the forest reference (emissions) levels REDD+ countries propose to be used as a baseline for calculating their greenhouse gas reductions or sequestrations should be technically assessed. Equally, the discussions on measurement, reporting and verification (MRV), one of the crunch issues of the Doha negotiations on REDD+ in 2012, had made considerable progress.

In Warsaw, the SBSTA negotiations on REDD+ started with civil society organisations (CSOs) and indigenous peoples groups expressing their concerns regarding the draft decisions agreed in Bonn, whose text had been significantly modified in the last moments of the Bonn negotiations. Criticism was raised against the lack of explicit provisions on reporting on safeguards and on the strong link established between livelihoods and drivers of deforestation and forest degradation. CSOs criticised that the draft decision on drivers developed in Bonn suggests that local communities and indigenous peoples are the *main* drivers of deforestation and forest degradation, while there is no reference to international commodity chains or large corporate producers

Notably, several Parties shared these concerns, in particular the reference to livelihood as a driver of deforestation, but decided not to reopen the agreed text. Instead, Parties followed the Norwegian proposal to include additional guidance on reporting of safeguards in the finance decision and to insert a paragraph in the COP report which clarifies that livelihoods cannot be considered the main drivers of deforestation and forest degradation.

With the decision not to reopen the three draft decisions developed in Bonn, the REDD+ negotiations under SBSTA concentrated on the two outstanding methodological issues, namely modalities for MRV and guidelines for the technical assessment of proposed forest reference (emissions) levels.

Decision -/CP.19, Modalities for national forest monitoring systems, advance unedited version. Online at http://unfccc.int/files/meetings/warsaw_nov_2013/decisions/application/pdf/cop19_fms.pdf, last accessed 12 December 2013.

²⁷ Decision -/CP.19, The timing and the frequency of presentations of the summary of information on how all the safeguards referred to in decision 1/CP.16, appendix I, are being addressed and respected, advance unedited version. Online at

http://unfccc.int/files/meetings/warsaw_nov_2013/decisions/application/pdf/cop19_safeguards_1cp16a1.pdf, last accessed 12 December 2013.

Decision -/CP.19 Addressing the drivers of deforestation and forest degradation, advance unedited version. Online at http://unfccc.int/files/meetings/warsaw_nov_2013/decisions/application/pdf/cop19_drivers_deforestation.pdf, last accessed 12 December 2013.

The question of verification had led to controversies between developing and developed countries and prevented an agreement on REDD+ in Doha in 2012, with Norway pushing for independent verification of actions by international experts and Brazil arguing that verification of REDD+ should be consistent with the considerably softer process of International Consultation and Analysis which had been agreed for NAMAs. In contrast, in Warsaw Parties were able to find common ground on MRV. The final decision²⁹ requires REDD+ countries seeking to receive results-based payments to submit a technical annex together with their biennial update report (BUR) and to allow the data and information to be analysed by a technical team of experts, consisting of two LULUCF experts, one each from a developing and a developed country. The decision further contains provisions on the type of information the annex must contain, the type of analysis to be conducted and the modes of interaction between the technical team of experts and the developing country.

Similarly, Parties agreed on a process for the technical assessment of reference (emissions) levels submitted by REDD+ countries.³⁰ The technical assessment of the reference (emissions) levels is intended to "offer a facilitative, non-intrusive, technical exchange of information [...] with a view to supporting the capacity of developing country Parties"³¹. In response to the inputs of the assessment team, developing countries may also modify the submitted forest reference (emissions) level in the course of the assessment process. With Parties agreeing on these issues during the first week of negotiations, SBSTA was able to forward the two draft decisions together with the draft decisions from Bonn to the COP. However, the draft decisions were forwarded in brackets, making their adoption dependent on the progress in the COP work programme on results-based finance for REDD+.

Under this work programme two workshops had been held during 2013, allowing Parties to exchange views on several issues related to REDD+ finance. Parties inter alia discussed existing barriers to provide and obtain results-based finance, the need to scale up financing for REDD+, the architecture for results-based payments, the role of the Green Climate Fund and the link between safeguards and results-based payments. Building on these discussions the negotiations in Warsaw made considerable progress and Parties were able to adopt a decision on finance.³² Parties agreed to establish an information hub on the UNFCCC website to publish information on results from REDD+ activities and corresponding results-based payments. In addition, Parties

Decision -/CP.19, Modalities for measuring, reporting and verifying, advance unedited version. Online at http://unfccc.int/files/meetings/warsaw_nov_2013/decisions/application/pdf/cop19_mrv.pdf, last accessed 12 December 2013.

Decision -/CP.19, Guidelines and procedures for the technical assessment of submissions from Parties on proposed forest reference emission levels and/or forest reference levels, advance unedited version. Online at http://unfccc.int/files/meetings/warsaw_nov_2013/decisions/application/pdf/cop19_frl.pdf, last accessed 12 December 2013.

Decision -/CP.19, Work programme on results-based finance to progress the full implementation of the activities referred to in decision 1/CP.16, paragraph 70, advance unedited version. Online at http://unfccc.int/files/meetings/warsaw_nov_2013/decisions/application/pdf/cop19_redd_finance.pdf, last accessed 12 December 2013.

decided that developing countries should provide the most recent summary of information on how minimum ecological and social standards (safeguards) have been respected and addressed *before* they can access results-based payments for forest mitigation activities; a requirement several non governmental organisations and indigenous peoples groups had been calling for. However, negotiators have not yet determined the content of these summaries countries are to submit. A final decision on this issue is expected to be adopted in Lima at the end of 2014.

The finance decision further stresses the relevance of positive incentives for non-carbon benefits that go beyond the mere reduction of greenhouse gases, allowing for the implementation of sustainable forest programmes that do not only reduce greenhouse gas emission but also have positive impacts on biodiversity and the livelihood of local communities. With regard to the disbursement of results-based finance, the Green Climate Fund has been assigned a "key role" 33. This clear reference to the GCF has been a key ask from Brazil and Bolivia, which have both favoured a non-market based approach for REDD+ financing. While Bolivia continuously expressed its opposition to any market-based mechanism for REDD+ in the course of the negotiations, Brazil reiterated its position that REDD+ shall not be financed via an offsetting mechanism. In this context, Brazil further suggested a paragraph to be inserted in the finance decision stating that its provisions do not prejudge the eligibility of REDD+ activities vis-à-vis the installation of a new market mechanism (NMM) or a framework for various approaches (FVA). Parties further request the Standing Committee on Finance to focus its next forum on issues related to finance for forest, to allow UNFCCC bodies and entities dealing with climate change finance to exchange information on ways and means to transfer results-based payments.

In the negotiations on institutional arrangements and the coordination of support for REDD+ activities, the question on whether a REDD+ specific institution should be installed proved a key issue of divergence. After no agreement had been reached on the issue during the negotiations under the joint SBI/SBSTA work programme in the first week of the negotiations, a draft text containing three different options was forwarded to the COP and discussions continued during the second week of the talks. As in Doha, Papua New Guinea on behalf of the Coalition for Rainforest Nations (CfRN) tried again to push its proposal for a specific REDD+ body under the COP. The new institution envisioned by CfRN was to become the overall advisory body to the COP on REDD+ related issues and to fulfil a large number of functions, such as to provide guidance on REDD+ to relevant UNFCCC bodies and to manage and coordinate requests for support of REDD+ activities. Other countries, among them the EU, USA and Norway but also Mexico, Chile and Colombia, however, did not see the need to install a new REDD+ institution at the international level. During the process of the negotiations, several Parties instead agreed with Brazil's position on the need to have coordination entities at the national level.

³³ ibid.

Accordingly, the final decision³⁴ does not install a REDD+ body but invites Parties to designate national entities (or focal points) at the national level that are to serve for the coordination of support of REDD+ and communicate with the relevant bodies of the Convention. These entities are encouraged to meet on an annual basis with Parties and relevant entities financing REDD+ activities. Parties further requested the SBI to review the outcomes of these meetings and to make recommendations on institutional arrangements at its 47th session (end of 2017) at the latest, leaving some room for the installation of a REDD+ institution at a later point in time.³⁵

7. Market Mechanisms

7.1 Discussions on New Mechanisms

Parties have been discussing options for scaling up existing and/or introducing new market mechanisms for many years. These discussions have been partly inspired by perceived weaknesses of the existing Clean Development Mechanism (CDM). Reform of the CDM itself has also been divisive topic in recent years. How to move forward with market mechanisms has become particularly salient in view of the low demand for carbon credits, which has caused carbon prices to drop to close to zero.

As in the previous years, the advancement of new carbon markets and reforming the existing flexible mechanisms proved difficult in Warsaw. The conference started off with an unexpected proposal by Brazil that suggested to enable countries to count pre-2020 mitigation actions as well as credits stemming from the Kyoto mechanisms towards the commitments of the post-2020 agreement. In terms of the Kyoto mechanisms, Brazil proposed promoting the voluntary cancellation of CERs, among other things, by private sector entities, civil society, and even individuals. Moreover, it suggested that Parties could voluntarily cancel CERs and ERUs, which would then be recognized and "added to [the Party's] contribution under the new instrument". Yet this proposal did not get enough support among Parties and was not pursued further. The final decision on further advancing the Durban Platform, however, contains a general

³⁴ Decision -/CP.19, Coordination of support for the implementation of activities in relation to mitigation actions in the forest sector by developing countries, including institutional arrangements, advance unedited version. Online at

http://unfccc.int/files/meetings/warsaw_nov_2013/decisions/application/pdf/cop19_mitigationactions_forest.pdf, last accessed 12 December 2013.

call for Parties "to promote the voluntary cancellation of certified emission reductions, without double counting, as a means of closing the pre-2020 ambition gap".³⁶

Establishing new market-based mitigation instruments has been on the agenda of the climate talks for a couple of years now. Views on this matter differ greatly, with the EU promoting the top-down "new market mechanism" (NMM) as defined by the Durban conference, while Japan, the US and other industrialised countries are in favour of a bottom-up "framework for various approaches" (FVA) that should accommodate national offsetting schemes like the Japanese Joint Crediting Mechanism (JCM), with nationally defined (and potentially less stringent) accounting rules. Last but not least, a couple of Latin American countries oppose market mechanisms in general. They have introduced the notion of non market-based approaches (NMA) into the negotiations.

As for the new market mechanism, COP 18 in Doha had decided that the Warsaw conference was to adopt modalities and procedures for the NMM. Yet times had changed since last year's conference. This was already mirrored in the slow pace of the negotiations at the intersessional meeting in Bonn June 2013. Developing countries are less and less willing to accept the necessity of new market-based instruments given the low level of ambition that developed countries show. A workshop in October that was to pave the way to decision making in Warsaw was not able to foster convergence of views.

Thus, the negotiations at Warsaw were characterised by the same antagonism between fulfilling the Doha mandate and a complete rejection of market-based mitigation measures. Consequently, the negotiation text that was debated shortly before the consideration of this agenda item was closed comprised two options: on the one hand, putting a moratorium on the new market mechanism, on the other an enumeration of elements that the NMM modalities and procedures should cover – comprising, inter alia, clarifying the role of the COP, setting standards to achieve a net decrease of GHG emissions, developing safeguards for environmental integrity, and stipulating the use of conservative methods for the establishment and periodic adjustment of ambitious reference levels. This gap proved too wide to bridge, and the negotiations broke down. Even the presidency of the COP, who was asked to take over after the talks under the SBSTA had failed, could not resolve the impasse. The NMM negotiations will be taken up again by the next SBSTA meeting in June 2014.

In the FVA negotiations, agreement on the basics of the FVA such as common accounting rules and an adequate level of transparency proved difficult. Therefore, the talks focussed on launching a platform for information exchange, the least comprehensive of three options tabled at the afore-mentioned workshop, as a first step. An early text proposal mentioned aspects to be included in the platform, such as

Wuppertal Institute for Climate, Environment and Energy

³⁶ Decision -/CP.19, Further advancing the Durban Platform, para 5©, Advance unedited version. Online at http://unfccc.int/files/meetings/warsaw_nov_2013/decisions/application/pdf/cop19_adp.pdf, last accessed 12 December 2013.

methodologies to determine baselines and targets, rules and procedures to ensure environmental integrity, arrangements to avoid double counting, and MRV issues. The platform was also to incorporate non-market-based approaches.

Yet, as in the NMM talks, neither the co-chairs of the spin off group nor the COP presidency were able to reach consensus. The talks will be continued in June next year.

The idea of the information sharing platform later appeared in text suggested for the ADP decision, yet this language did not make it into the final decision.

7.2 Reforming the Existing Flexible Mechanisms

The discussions on reforming the modalities and procedures of the Clean Development Mechanism were even more thorny. They started under difficult circumstances as the talks on this agenda item of the Subsidiary Body for Implementation (SBI) should have started at this summer's negotiations in Bonn already. However, controversies about procedural matters prevented the SBI agenda from getting adopted and as a result, only an informal workshop outside the SBI agenda took place. Moreover, Parties again got stuck on the missing demand controversy. No agreement on substance could be achieved, and the review of the modalities and procedures was postponed to next year's climate conference.

Apart from the overall reform discussions, the CMP also discussed its annual guidance document. This was the only arena where a few technical advancements are visible. The text³⁷ demands, inter alia, clearer rules for projects that are conducted at the same physical location at which a terminated project existed. Also, the CDM Executive Board (Board) is to evaluate its existing voluntary sustainable development tool and to develop "guiding tools" that can help host country authorities monitoring the sustainable development benefits of CDM projects.

On CDM Programmes of Activities, the Board is tasked to analyse the thresholds for component project activities and to further improve the regulations for programmes taking place in more than one host country. The annual debate on additionality led to the repetition of the request to "examine alternative approaches to the demonstration and assessment of additionality".

The CMP also welcomed progress made in establishing the regional collaboration centres set up by the Board that are to foster CDM project activities in underrepresented regions. Last but not least, the Board is to collect information on practices for local

³⁷ Decision -/CMP.9: Guidance relating to the clean development mechanism, advance unedited version.
Online at

http://unfccc.int/files/meetings/warsaw_nov_2013/decisions/application/pdf/cmp9_cdm_guidance.pdf, last accessed 12 December 2013.

stakeholder consultations, in order to assist DNAs in developing guidelines for the consultation process.

The ambition of reforming JI seems to mirror the dwindling significance of the mechanism. The review of the Joint Implementation guidelines suffered the same fate as reviewing the CDM modalities and procedures – it was postponed to the June intersessional meeting. The annual guidance text to JI³⁸ underlines the need to improve the mechanism. The Joint Implementation Supervisory Committee is to elaborate on its proposals to align JI's accreditation system with the one of the CDM.

8. Loss and Damage

As during last year's climate negotiations in Doha, this year's conference in Warsaw was overshadowed by announcements of extreme weather events. The devastation caused by supertyphoon Hiyan in the Philippines exemplified where the limits of adaptation measures lie and pushed the discussion on how to deal with climate-induced losses and damages to the centre stage of the negotiations. In Doha, the question on the installation of a mechanism on loss and damage already proved to be a crunch issue of the negotiations between developed and developing countries and countries agreed on a compromise formula, stating that "institutional arrangements, such as an international mechanism" would be established in Warsaw.

In Warsaw, developing countries arrived with the clear goal to establish this international mechanism under the COP. The group of G77/China tabled a detailed proposal already at the start of the negotiations that the group wanted to be used as a basis for textual discussions. The proposal again called for compensation, a concept which already in Doha had evoked the fierce opposition of developed countries due to concerns regarding financial liability for loss and damage in developing countries. Accordingly, developed countries were also unwilling to discuss the issue in Warsaw. Despite these continuing fundamental differences, Parties managed to concentrate the discussions on the overall purpose of the mechanism, its organisational structure and functions, and made slow but steady progress during the first week of the negotiations. Some developed countries engaged actively in the negotiations with developing countries, such as Norway, who proposed the establishment of the "Warsaw platform for loss and damage" under the Cancún Adaptation Framework comprised of three elements for the areas of knowledge building, coordination and coherence, and action and support. Individual developed countries, however, showed less willingness to

³⁸ Decision -/CMP.9: Guidance on the implementation of Article 6 of the Kyoto Protocol, advance unedited version. Online at

http://unfccc.int/files/meetings/warsaw_nov_2013/decisions/application/pdf/cmp9_ji.pdf, last accessed 12 December 2013.

compromise, such as Australia, who inter alia opposed individual elements which Parties had already agreed on earlier, like rehabilitation funds. After the negotiations had been transferred to the COP, discussions continued throughout the second week of the negotiations. The main point of discussions in the final hours of the negotiations continued to be the question on where the mechanism should be established. The G77/China wanted the mechanism to be established under the COP to reflect the fact that the issue goes beyond adaptation and is recognized as the third pillar of the UNFCCC next to mitigation and adaptation. Several developed countries generally preferred an institutional solution under the Cancún Adaptation Framework, with the US being particularly concerned about the financial and legal implications of establishing loss and damage as a third pillar. After very intense negotiations Parties finally agreed to install the "Warsaw international mechanism for loss and damage associated with climate change impacts". 39

Contrary to what developing countries had originally asked for, this international mechanism will however not be set up under the COP but be established under the Cancún Adaptation Framework. Developing countries agreed on this compromise after intensive discussions in the plenary, which had in return ensured them a review of the mechanism's structures, its mandate and efficiency by 2016. With this review, there is still the possibility to move the mechanism out of the Cancún Adaptation Framework and lift it to a higher level in the future. Developing countries further managed to include a passage in the preamble which acknowledges that "loss and damage associated with the adverse effects of climate change includes, and in some cases involves **more than**, that which can be reduced by adaptation." This can be considered a first recognition of the fact that loss and damage goes beyond adaptation.

The decision outlines three broad working areas, each containing a list of functions the mechanism is to fulfil: Enhancement of knowledge and understanding of risk management approaches to address loss and damage, strengthening interaction among relevant stakeholders and the enhancement of action and support. The implementation of these functions will be guided by the executive committee of the mechanism, which is to report annually to the COP through the subsidiary bodies and make recommendations. As an interim measure, this committee will consist of representatives from several existing bodies, including the Adaptation Committee and the Standing Committee on Finance, until a final decision on the composition and the procedures of the committee is adopted. Parties requested the subsidiary bodies SBSTA and SBI to make recommendations on this matter to the Conference of the Parties for adoption at their next meeting in Lima in December 2014.

³⁹ Decision -/CP.19, Warsaw international mechanism for loss and damage associated with the adverse effects of climate change, advance unedited version. Online at http://unfccc.int/files/meetings/warsaw_nov_2013/decisions/application/pdf/cop19_lossanddamage.pdf, last accessed 12 December 2013.

⁴⁰ ibid. Emphasis added.

9. Adaptation

With the negotiations on a mechanism for loss and damage being at the centre stage of the negotiations, the general focus of the attention was on how to deal with climate related impacts that go beyond adaptation. In parallel, however, discussions on adaptation-related issues were held in different other fora, making the process particularly challenging for smaller countries' delegations.

One issue was the question on the continuation and future design of the Nairobi Work Programme (NWP), which supports developing countries in the analysis and assessment of adaptation-related issues and is to lead to improved decision-making and implementation of measures. In advance of the negotiations on the NWP, a technical paper on the use of indigenous and traditional knowledge and the application of gender sensitive approaches was prepared, and several Parties made submissions suggesting different topics the NWP should focus on. In the final decision⁴¹, Parties agreed on a continuation of the work programme for further 5 years and decided to widen its scope and enhance the coordination with other bodies and processes. The SBSTA, responsible for carrying out the NWP, is to inter alia consider the issues of ecosystems, human settlements, water resources and health and to further discuss issues for consideration under the NWP at its 41st session in December 2014. Parties further agreed that the activities undertaken under the work programme should integrate gender issues, indigenous and traditional knowledge and the role and impacts on ecosystems. SBSTA is further requested to review the Nairobi work programme at its 48th session and to report to the COP at its 24th session.

Warsaw also saw the presentation of the Adaptation Committee's first thematic report on the current status of adaptation, which was generally well received. The Adaptation Committee (AC), which was established in 2010 in Cancún as the main body dealing with adaptation issues under the Convention, had held its first meeting in 2012 and had elaborated a draft workplan, which was adopted by the COP in Doha. In Warsaw, Parties welcomed the progress made in the implementation of this three-year work plan, and encouraged the AC to continue its work. Given the difficult financial situation of the committee, all Parties, not only developed countries, as G77/China had demanded, were again encouraged to make available sufficient resources for the successful implementation of the workplan in the future.⁴² The general lack of funding for adaptation measures was highlighted by developing countries as a crucial problem in several meetings. Against this background, it was praised as a ray of hope when the

⁴¹ Decision -/CP.19, Nairobi work programme on impacts, vulnerability, and adaptation to climate change work programme [sic!], advance unedited version. Online at http://unfccc.int/files/meetings/warsaw_nov_2013/decisions/application/pdf/cop19_nairobiwp.pdf, last accessed 12 December 2013.

⁴² Decision -/CP.19, Work of the Adaptation Committee, advance unedited version. Online at http://unfccc.int/files/meetings/warsaw_nov_2013/decisions/application/pdf/cop19_adaptationcommittee.pdf, last accessed 12 December 2013.

Adaptation Fund was able to meet its goal of raising 100 million USD due to the pledges made by several European countries in Warsaw.

10. Finance

The mobilisation of adequate financing balanced between mitigation and adaptation measures has been one of the major "crunch issues" in the negotiations for a long time. With the establishment and subsequent operationalisation of the Green Climate Fund, hopes of developing countries had been high prior to Warsaw that industrialised countries would start capitalising the fund in order to raise it from its current status of an "empty shell". Funding commitments for the GCF would in part also address what proved to be a major stumbling block in this year's negotiations: How will industrialised countries reach their stated goal to raise their finance efforts to a steady annual global sum of 100 billion USD in 2020?

The GCF still had not been fully operationalised prior to the Warsaw COP, which made industrialised countries' finance ministries hesitate to commit financial resources. For a full operationalisation, the relationship between the COP and the GCF had to be clarified and adopted by this year's COP. To this end the UNFCCC's Standing Committee on Climate Finance had prepared draft arrangements that passed muster without strong dissent among country delegations.⁴³ The arrangements state that the GCF is to be guided by the COP. The GCF will submit annual reports on policy implementation, programme priorities and eligibility criteria, as well as activities, financial resources and status of allocation for mitigation and adaptation.⁴⁴

The GCF has now concluded its interim stage. An independent secretariat is now being established and, with Hela Cheikhrouhou, an Executive Director has been selected. The Fund will now take up its work in Songdo, South Korea. The COP took note with appreciation of the GCF's report and provided initial guidance to: balance resource allocation between mitigation and adaptation, but to also ensure resources for other activities; to pursue a country-driven approach; and to take into special account the adaptation needs of vulnerable developing countries. The COP's guidance also confirms that all developing countries are eligible for resources of the GCF.⁴⁵

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⁴³ Decision -/CP.19, Report of the Standing Committee on Finance to the Conference of the Parties, advance unedited version. Online at

http://unfccc.int/files/meetings/warsaw_nov_2013/decisions/application/pdf/cop19_scf.pdf, last accessed 12 December 2013.

⁴⁴ Decision -/CP.19, Arrangements between the Conference of the Parties and the Green Climate Fund advance unedited version. Online at http://unfccc.int/files/meetings/warsaw_nov_2013/decisions/application/pdf/cop19_cop_gcf.pdf, last accessed 12 December 2013.

⁴⁵ Decision -/CP.19, Report of the Green Climate Fund to the Conference of the Parties and guidance to the Green Climate Fund, advance unedited version. Online at http://unfccc.int/files/meetings/warsaw_nov_2013/decisions/application/pdf/cop19_report_gcf.pdf, last accessed 12 December 2013.

The COP also provided additional guidance on the expeditious operationalisation of the GCF and its 2014 workplan, urging the GCF Board to finalise as soon as possible the essential requirements to receive, manage, programme and disburse financial resources⁴⁶ that the GCF Board had identified at its fifth meeting in October 2013.⁴⁷ The COP called for ambitious and timely contributions by developed countries with a view to devise a formal replenishment process by COP 20 in 2014, underlining that the initial mobilisation should reach a very significant scale. The Board was among others requested to consider important lessons learned on country-driven processes from other existing funds, and to report progress to the next meeting of the COP.⁴⁸

A press release by the GCF on November 19, 2013, reiterates the GCF Board's commitment to fulfil all essential institutional and administrative requirements by September 2014, so that countries can start filling up the fund. It may be hoped that this goal is reached, so the GCF can become an attractive financing vehicle in time for UN Secretary Ban Ki Moon's climate summit in autumn next year. The GCF will certainly profit to move from its three-year-long "becoming-fully-operational" institutionalisation to an actual operating phase, where questions of institutional arrangements are replaced with questions of funding priorities for transformational change in developing countries.

However, hopes of developing countries that decisive steps towards institutionalisation of the GCF would lead to heightened ambition to pledge substantial financial resources by developed countries were disappointed. Once again the issue of mid- and long-term finance provisions came close to failure of the negotiations. Discussing the extension of the Work Programme on Long-Term Finance, developing and industrialised countries clashed in a familiar manner. Many developing countries stated that they expected COP19 to be a "finance COP", with clear and ambitious pledges for funding by developed countries, and a roadmap for scaling up climate finance levels from Fast Start Finance levels of 10bn USD annually to the 100 billion USD from 2020 commitment. Some developed countries, most notably Australia, but also the USA, rejected continued financing commitments or quantified pathways, while many developing countries called for a clear-cut mid-term target of 70 billion USD to be mobilised annually by 2016.

The decision finally adopted omits any clear language on a roadmap for upscaled climate finance, but urges developed countries "to maintain continuity of mobilization of public climate finance at increasing levels from the fast-start finance period in line with their commitment to the goal of mobilizing USD 100 billion per year in 2020 from a wide variety of sources, public and private, bilateral and multilateral, including

⁴⁶ Ibid.

⁴⁷ Green Climate Fund, Decisions of the Board - Fifth Meeting of the Board 8-10 October 2013. Online at http://gcfund.net/fileadmin/00_customer/documents/pdf/GCF_B05_23_Decisions_5th_Meeting_of_the_Board_20131108.pdf, last accessed 12 December 2013.

⁴⁸ Report of and guidance to the CGF, supra note 45.

alternative sources".⁴⁹ Developed countries are requested to prepare biennial submissions on their strategies and approaches for pathways in order to scale up midterm climate finance, including information on policies, programmes and priorities, actions and plans to mobilise additional finance, and balanced allocation of finance for mitigation and adaptation and for vulnerable countries.

The decision also recognises the financial pledges made by countries at COP19, including the contributions to fulfil the fundraising goal of 100 million USD for the Adaptation Fund. The Work Programme on Long-Term Finance will continue until 2020, and will also now include biennial high-level ministerial dialogues starting next year.

Despite the generality of the decisions on Long Term Finance and the COP's guidance to the Green Climate Fund, Australia stated in the final COP/CMP plenary that its participation in the decision did not mean that it accepted provisions for developed countries to maintain and increase their climate finance, and on ambitious and timely contributions to the GCF. It may thus be feared that any future decisions to increase and strengthen the ambition of developed countries' financing commitments within the UNFCCC context will meet with strong resistance.

11. Technology

Technology transfer issues continued their slow but steady implementation process in Warsaw. Notably, Parties agreed on modalities and procedures of the Climate Technology Centre and Network (CTCN) that were suggested by its Advisory Board. In the previous year, UNEP had been chosen to host the CTCN as a leader of a consortium including UNIDO, but without modalities and procedures, the organisation had not been able to start its work.

The modalities are now in place. The CTCN will support developing countries in devising technology needs assessments (TNAs), national adaptation programmes of action (NAPAs) and national climate strategies. It will also foster collaboration and access to information to accelerate climate technology transfer, and strengthen networks, partnerships and capacity-building. It will consult with the Technology

⁴⁹ Decision -/CP.19, Work programme on long-term finance, advance unedited version. Online at: <u>http://unfccc.int/files/meetings/warsaw_nov_2013/decisions/application/pdf/cop19_ltf.pdf</u>, last accessed 12 December 2013.

Executive Committee (TEC) in order to provide for coherent and synergistic approaches.⁵⁰

At a side event on the CTCN following the approval of the modalities and procedures, UNEP Executive Director Achim Steiner hailed the CTCN as "a further building block towards that low-carbon future", 51 and the NGO conference paper ECO declared: "The full operationalization of the Technology Mechanism now emerges as the good news story of COP 19." 52

However, one major struggle remains in the UN deliberations on technology transfer, the question of improved access to environmentally sound technologies covered under Intellectual Property Rights (IPRs). Many developing countries are keen to include access to IPRs in the Technology Mechanism, while industrialised countries are adamantly against their inclusion. Pushing back on a proposition championed by the G77 and China, the USA and Australia blocked a decision on guidance to the TEC as they objected to including a request to consider participation of the TEC as an observer at meetings of the World Intellectual Property Organization (WIPO) and the World Trade Organization (WTO).⁵³ As a result, the SBI did not reach consensus in consideration of the report of the Technology Executive Committee. The agenda item will be taken up again at the SB meeting in June 2014.

12. Groundhog Day on the Vistula

12.1 Assessing the Warsaw Outcome

Warsaw once again starkly highlighted the sharp divisions and lack of trust among countries. Industrialised countries' collective lack of leadership on mitigation and means of implementation, sharply highlighted by Japan's announcement to drastically reduce the level of ambition of its 2020 mitigation goal, the EU's inability to move

Decision -/CP.19, Modalities and procedures of the Climate Technology Centre and Network and its Advisory Board, advance unedited version. Online at: http://unfccc.int/files/meetings/warsaw_nov_2013/decisions/application/pdf/cop19_ctcn.pdf, last accessed 12 December 2013.

⁵¹ UNEP News Centre (21 November 2013), Climate Technology Centre and Network Ready to Assist Developing Countries. Online at: http://www.unep.org/newscentre/Default.aspx?DocumentID=2755&ArticleID=9708&l=en, last accessed 12 December 2013.

⁵² CAN ECO (22 November 2013), Technology: A Good News Story. Online at http://www.climatenetwork.org/sites/default/files/eco-nov22-english.pdf, last accessed 12 December 2013

TWN Warsaw News Update 15 (18 November 2013), Progress on technology issues blocked by developed countries. Online at http://www.twnside.org.sg/title2/climate/news/warsaw01/TWN_update15.pdf, last accessed 12 December 2013.

beyond its already-achieved 2020 target, as well as Australia's dismantling of its climate legislation and its particularly uncompromising stance on finance issues, strongly contributed to re-opening the traditional North-South divide. While recent years had seen an increasing differentiation among developing country positions, Warsaw to some extent saw a re-closing of ranks among the G77 and China. The LMDCs quite aggressively opposed any movement towards increased differentiation in the 2015 agreement. While some developing country groups, e.g. AOSIS, LDCs and AILAC, had presented themselves more flexible on the issue in the past, the collective ambition failure of industrialized countries did not allow them to continue a more collaborative negotiation strategy. Instead they (silently) joined the stance of the LMDCs. Consequently, G77 and China rhetoric centred around an unanimous call for more ambition from industrialised countries and the Brazilian proposal to determine post-2020 mitigation contributions on the basis of historical responsibility got strong support from many quarters.

As a result of the fundamental divisions among Parties, the final text from ADP Workstream 1 hardly goes beyond the lowest common denominator. The reference to "contributions" instead of "commitments" accommodates the position of the LMDCs that there should be no binding commitments for non-Annex I countries. On the other side, Annex I countries prevented any differentiation between themselves and non-Annex I countries regarding the legal nature of their participation in the future agreement; instead of differentiated provisions there is only one set of provisions that applies to all countries. The late date, the Lima COP, which was ultimately agreed on for the identification of the information that is to be submitted alongside the "intended contributions" is not helpful for ensuring that transparent and adequate contributions will be tabled in the first quarter of 2015. There is also no language whatsoever on what is going to be the process for the international consideration of the intended contributions once they have been submitted. While the submission of intended contributions is to be without prejudice to their legal nature, given the negotiation dynamics the 2015 agreement thus currently seems to be on course to continue the current structure: non-binding pledges that are determined purely bottom-up instead of being negotiated internationally.

Some seem to expect that researchers and environmental organisations will compensate for the lack of a formal process to assess the "intended contributions". Initiatives such as the UNEP Gap Report or the Climate Action Tracker have indeed strongly contributed to keeping the lack of ambition in the spotlight. However, such assessments do not appear out of thin air, doing them takes money. If governments want their peers' "intended contributions" to be put under a public spotlight, which in particular the USA expects to be the main driver for increasing ambition, they will need to come up with the money to perform the wished-for assessments.

The ADP Workstream 2's discussion on enhancing pre-2020 ambition remained in a virtual deadlock during the Warsaw talks. Despite various efforts, it was not possible to

shift the narrative of the negotiations away from the historically dominant and confrontational narrative of "climate change mitigation as a burden on economic development" to a more co-operative one that emphasizes the (economic) opportunities that many mitigation options, particularly renewable energy and energy efficiency, entail. The AOSIS proposal to create a "Warsaw Workplan", a technical process to enhance mitigation in different areas including improved deployment of renewable energy and energy efficiency, could have been a promising road towards a more co-operative narrative. Especially if it had been possible to integrate it with the proposal to engage in so-called 'international cooperative initiatives' as proposed by the EU and supported by many developed countries.

Instead, parties repeated their well-known and extensively spelled-out positions. As in Workstream 1 Parties agreed only on their lowest common denominator: continuing negotiations at ministerial level in June. The only ADP Workstream 2 outcome in Warsaw that lies a bit off the beaten track is the invitation to parties to voluntarily cancel certified emission reductions generated under the Clean Development Mechanism as a means to close the mitigation gap. Given the current situation, this invitation appears to be more of a last resort to try to reanimate international carbon markets than as a serious move to close the mitigation gap.

Looking at the recurring patterns of deliberations on finance within the UNFCCC, the outlook is bleak. Developed countries continue their reluctance to put forward ambitious financing for multilateral climate efforts. While matters of form, such as institutional arrangements, pass with relative ease, matters of substance, such as raising ambition of financing commitments, or clear roadmaps including defined milestones, result in by now well-known stand-offs between developed and developing countries.

There certainly is no lack of disbursement channels, and with the final steps to a full operationalisation of the GCF, another major one will soon be open. Its monetisation should be a high priority for the planned high-level ministerials under the work programme on long-term finance. Anyhow, this also means serious work for the Fund's Board to establish clear funding priorities and criteria, but also for developing countries to demonstrate clear institutional structures that enable them to devise truly transformational approaches to mitigation and adaptation at a national level. Doing so will not only heighten their sense of ownership in their national combat against climate change, but may also induce developed countries to step up their multilateral financing efforts in the run-up to 2020.

Familiar red lines appeared once more in the negotiations on the Convention's Technology Mechanism. The successful full launch of the Climate Technology Centre and Network may well be attributed to its "soft" mandate of capacity support, which anyhow will very much depend on a continuous and dependable funding base that has not been established yet. However, the COP's inability to reach consensus on its guidance to the Technology Executive Committee clearly results from some countries'

efforts to stop any mention of intellectual property rights within the boundaries of the climate regime in its tracks.

While it may be debatable if access to IPRs is truly a decisive issue for the transfer of environmentally sound technologies in most cases, the ongoing impasse can be lamented. The TEC's participation as an observer in UN institutions relevant for technology transfer can have highly synergistic effects and could inform other fora of challenges and opportunities for technological cooperation at the climate and energy nexus. The strong opposition by Australia and the USA demonstrates their unwillingness to open up any pathways into the IPR issue.

Against the background of the lack of progress in most other areas, the establishment of the "Warsaw international mechanism for loss and damage associated with climate change impacts" can be considered a meaningful outcome. Despite this new mechanism sitting under the Cancún Adaptation Framework, this step can be seen as a first recognition of the fact that climate change induces impacts that cannot be dealt with by implementing adaptation measures and that developing countries will need to be assisted in coping with these impacts. However, for this decision to become part of a larger success story and in order to adequately assist countries in coping with loss and damage, the mandate and scope of the mechanism will have to be further strengthened.

Similarly, the decisions taken on REDD+ were greeted by many as a silver lining. With these decisions, the main chapters of the "rulebook for REDD+" have been finalized. However, the provisions are rather general and it remains to be seen how they will be applied on the ground and how they will influence ongoing REDD+ activities in developing countries. In addition, besides outstanding issues, such as the agreement on further guidance for reporting on safeguards, one central challenge remains: the lack of funding for REDD+ activities. Parties in Warsaw reiterated that financing will come from a large variety of sources, without further specifying where money will actually come from. Similarly, by assigning a "key role" to the Green Climate Fund, Parties decided to assign a core function for REDD+ financing to an entity which is currently still in the progress of becoming fully operational and yet to be filled up with funding.

12.2 Who Will Lead Towards the 2015 Agreement?

A fundamental question is which countries are supposed to be the drivers of ambition. Among the "big three", the USA, China and the EU, China continues to maintain a very defensive position and while many lauded the US stance in Warsaw as constructive, it continues to be tied down by its domestic situation, where large parts of the Republican Party deny that climate change even exists.

If the resistance of the LMDCs against binding commitments continues, they may in fact provide a convenient escape hatch to the USA. While the USA has long advocated

for a "bottom-up" regime "very different from the Kyoto Protocol", they have also posited that they would be willing to accept legally binding commitments if all countries agreed to be legally bound. In truth, however, given the domestic situation in the USA, there is hardly any chance of a climate treaty gaining the 2/3 majority necessary for ratification by the US Senate. The US has in the past been accused of trying to drag everybody else down to the level of what they can achieve domestically, but if the LMDCs maintain the position they took in Warsaw they are likely to be assigned a major share of the blame for any shortcoming of the 2015 agreement.

The EU has traditionally been the motor of the climate negotiations, all major advances came about when the EU was able to form a "green coalition" with other progressive countries, in particular the most vulnerable. However, leadership requires more than rhetoric, the EU will only be able to win and maintain allies if it is able to match words with substance. And substance is sorely lacking. The EU has only committed to keeping its emissions stable for the rest of the decade and only some of its member states have been willing to put meaningful amounts of finance on the table. As a result, the EU's Durban alliance fractured one year later already since the EU was not able to meet its partners' expectations on mitigation and finance. And the EU also does not appear to be on track to bring serious ambition for the post-2020 period to the table. The UK Committee on Climate Change, a watchdog authority established by the UK Climate Change Act, has recommended that the EU should aim for a reduction of 55% below 1990 levels by 2030.⁵⁴ However, political discussions are gravitating around a mere 40%. PointCarbon has projected that a 40% target would mean that the EU ETS would be oversupplied until about 2027.⁵⁵

If the EU wants to prevent Paris from becoming an event that is strong on pathos but empty on substance, it will have to do some serious homework.

13. How to Escape from Groundhog Day?

To those who expect the UNFCCC process to somehow deliver a top-down solution for the dangers of climate change, Warsaw was nothing more but another deep disappointment. However, the key to understanding the climate conferences is that they are not where decisions are taken: The decisions are taken in the national capitals. The positions countries take internationally are determined by their domestic political situations. International negotiations can therefore rarely take decisions that have not

⁵⁴ Committee on Climate Change (2010): The Fourth Carbon Budget, Reducing emissions through the 2020s. London: Committee on Climate Change. Online at http://www.theccc.org.uk/publication/the-fourth-carbon-budget-reducing-emissions-through-the-2020s-2/, last accessed 13 December 2013.

⁵⁵ PointCarbon, European Carbon Market to Remain Oversupplied Until 2027, 19 September 2013. Online at http://www.pointcarbon.com/aboutus/pressroom/pressreleases/1.2584441, last accessed 13 December 2013.

previously been prepared nationally. And the current situation is that in most key countries there is as yet no appetite to undergo the fundamental economic and ecologic transformation that is necessary.

If any meaningful outcome is to be produced, Parties will have to start seeing and utilizing the UNFCCC process differently. The UNFCCC can catalyse collaboration by creating a space for exchange and drawing public attention. Parties should, therefore, start seeing the UNFCCC as an enabler for domestic climate policy. The UN arena must be seen more as a starting point for action rather then as the place were THE process of making climate policy takes place. In this chapter, we develop ideas on how this can be achieved.

13.1 A Misguided Narrative of Pain and Sacrifice

One of the main reasons why progress is so slow is that many people are not convinced that it is actually possible to sharply reduce emissions without wrecking the economy. Industrialised countries fear that taking the lead will lead to deindustrialisation and developing countries see being able to emit CO₂ without constraint as much-needed "development space". While many have tried to stop talking about "burden sharing" and instead talk about "effort sharing", "burden sharing" is what everyone has on their minds.⁵⁶

Yvo de Boer, the former head of the UNFCC secretariat, reportedly identified this lack of confidence in the viability of low-emission development as the key factor behind the failure of Copenhagen to deliver the hoped-for agreement.⁵⁷ And this mind-set continues to be as present as it has ever been. When the EU was challenged in Warsaw about its inability to increase its target, the EU defended its position by arguing that achieving the reductions it had achieved had already taken an enormous amount of effort.

With this mindset, it is not surprising that the main goal of most major emitters seems to be to shift as much as possible of this perceived burden to others, with everyone accusing everyone else of not doing their fair shares. International climate diplomacy is thus a game of Mikado where everybody thinks that they will lose out if they move first.

However, the main distributional conflict is arguably within countries, not between countries. While all business models relying on the use of fossil fuels will clearly need

⁵⁷ Doha: Loss and damage in the desert - 10 Dec 2012 - James' Blog: a blog from BusinessGreen. Online at http://www.businessgreen.com/bg/james-blog/2230841/doha-loss-and-damage-in-the-desert, last accessed 17 December 2012.

⁵⁶ As evidenced for example by a list of statements by political leaders quoted in Moomaw, William, and Mihaela Papa (2012): "Creating a mutual gains climate regime through universal clean energy services", in: Climate Policy, Vol. 12, No. 4, pp. 505-520, p. 507.

to be changed or disappear entirely, whether reducing emissions does indeed impose a net economic burden at the macro level seems questionable for a number of reasons.

First, maintenance of the current energy system is far from cheap and will tend to become ever more expensive in the future. According to a recent study by the International Monetary Fund (IMF), the world each year spends trillions of dollars on energy subsidies, which mostly benefit fossil fuel use. The IMF puts the value of the subsidies at 0.7% of world GDP on a pre-tax and 2.5% of world GDP on a post-tax basis (including externalities). And while the purported objective of these subsidies often is to help with energy access of the poor, according to the IMF, most of the benefits are actually captured by higher-income households. Just removing these subsidies could according to the IMF reduce CO₂ emissions by 13%.⁵⁸ The recent World Energy Outlook (WEO) special report on climate change by the International Energy Agency (IEA) complements that global fossil fuel subsidies are six times the level of support received by renewable energy technologies and that 15% of global CO₂ emissions effectively receive an incentive of US\$110 per tonne through fossil-fuel subsidies.⁵⁹

The EU alone spends around €400 billon on oil imports each year, which corresponds to around 3% of the EU's GDP. The IEA's chief economist Fatih Birol has commented that this is "the equivalent of a Greek crisis – every year". Sub-Saharan African countries in 2011 spent more on oil imports (\$18bn) than they received in official development assistance (ODA) (\$15.6bn).⁶⁰

Second, in the mid-term a large share of the necessary emission reductions can be achieved at a net economic benefit through efficiency improvements. The IEA for the 2012 WEO developed an "Efficient World Scenario" that is based on doing no more than exploiting energy efficiency opportunities which justify themselves economically in terms of rates of return and payback periods but are not being utilised due to a variety of barriers. According to the IEA, mobilising this potential through appropriate policies to remove these barriers would result in a global emission trajectory that up to 2020 would be nearly identical with the IEA's 450 Scenario, which represents a trajectory that would lead to a stabilisation of atmospheric GHG concentrations at 450 ppm CO₂-eq. The Efficient World Scenario would lead to a peak of energy-related CO₂ emissions before 2020, and even up to 2035 implementation of the Efficient World Scenario would take the world nearly halfway to the 450 Scenario.

⁵⁸ International Monetary Fund (2013): Energy Subsidy Reform: Lessons and Implications. January 28, 2013. Online at http://www.imf.org/external/np/pp/eng/2013/012813.pdf, last accessed 24 June 2013.

⁵⁹ IEA (2013): Redrawing the Energy-Climate Map. World Energy Outlook Special Report. Paris: OECD/IEA. Online at http://www.worldenergyoutlook.org/energyclimatemap, last accessed 24 June 2013.

Quoted in: The Guardian: Overseas aid to Africa being outweighed by hefty costs of importing oil, 1 April 2012. Online at http://www.guardian.co.uk/world/2012/apr/01/overseas-aid-africa-oil-imports-costs?newsfeed=true, last accessed 24 June 2013.

According to the IEA, the Efficient World Scenario would result in a more efficient allocation of resources, boosting cumulative economic output through 2035 by US\$18 trillion, with a 0.4% higher global GDP in 2035 than in the New Policies Scenario, which reflects current and announced policies. Additional investment of \$11.8 trillion in more efficient end-use technologies would be needed, but this would be more than offset by a US\$17.5 trillion reduction in fuel expenditures and US\$5.9 trillion lower supply-side investment. One may also note that the scenario mainly considers incremental changes to the technologies and practices used, but not more holistic concepts, such as prioritising energy efficiency at all levels of urban planning, or lifestyle changes.

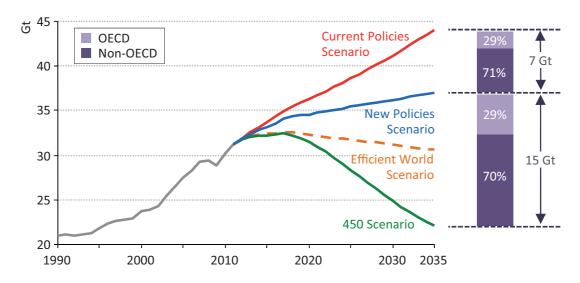


Figure 1: Energy-related CO₂ emissions in the 2012 WEO's Current Policies, New Policies, Efficient World and 450 Scenarios⁶¹

Third, the picture on the energy provision side is changing rapidly. Equipment costs of solar photovoltaics (PV) have fallen by about 80% within the last five years. Wind turbine costs have fallen by 29% in the same timeframe even though starting from a much lower level. A recent report by GTM Research notes that 2009 industry roadmaps were targeting US\$1.00/W module costs as a medium-term goal, while in fact best-in-class Chinese producers are now already approaching costs of US\$0.50/W. The report projects that solar PV module costs will fall further to US\$0.36 per watt by the end of 2017. McKinsey has similarly projected that solar PV costs will continue to fall by as much as 10% annually by 2020. A recent report by Citigroup projects that both

⁶² Liebreich, Michael (2013): Keynote. Bloomberg New Energy Finance Climate Summit. 23 April 2013. Online at http://bnef.folioshack.com/document/summit2013/1czp7t, last accessed 25 June 2013.

⁶¹ IEA (2012): World Energy Outlook 2012. Paris: OECD/IEA, p. 318.

Mehta, Shyam (2013): PV Technology and Cost Outlook, 2013-2017. GTM Research. Online at http://www.greentechmedia.com/research/report/pv-technology-and-cost-outlook-2013-2017, last accessed 25 June 2013.

⁶⁴ Aanesen, Krister; Heck, Stefan; Pinner, Dickon (2012): Solar power: Darkest before dawn. McKinsey&Company. Online at http://www.mckinsey.com/client_service/sustainability/latest_thinking/solar_powers_next_shining, last accessed 25 June 2013.

wind and solar will be fully competitive with other energy sources in most parts of the world by 2020.⁶⁵ Analysts note that 2/3 of the about 100GW of solar PV that is currently installed globally has been installed in the last 2.5 years, and project that another 100GW will be installed in the next 2.5 years.⁶⁶

Ironically, these developments are to a large extent driven by some of the countries that are among the most recalcitrant within the UNFCCC. While Japan now has a target that would allow it to increase its emissions, it is projected to become the world's largest solar PV market this year, neck to neck with China.⁶⁷ Japan argues that the shutdown of all of its nuclear plants post-Fukushima made its change of targets necessary, but according to analysis by Ecofys, Climate Analytics and the Potsdam Institute for Climate Impact Research, even fully replacing all those nuclear plants with coal would merely halve the original target.⁶⁸ Given the rapid scale-up of renewables, Japan's actual emission trajectory can thus probably be expected to be much more climate friendly than its new target indicates. And while China took a hard-line position on the issue of taking binding commitments in Warsaw, it at the same time went to great length to showcase its substantial investment in climate-friendly technologies and the launch of regional pilot emission trading systems. Some analysts, including ones like Citigroup that can probably not necessarily be considered to be environmentally blinkered, even consider that Chinese coal consumption may flatten within this very decade, driven by the government's desire to shift the economy away from manufacturing, more modest growth targets, plans to cut air pollution and to aggressively push non-coal energy sources.⁶⁹

Fourth, in addition to the global climate externality fossil fuel use also causes substantial local externalities that have to be borne by the public, such as local air, water and land pollution. Climate change is far from the only problem the world has with its current fossil-based energy system. A recent study by Stuttgart University concluded that local air pollution from fossil fuel use causes 22,000 premature deaths per year in Europe, as well as costs of billions of Euros for disease treatment and lost working

⁶⁶ Lacey, Stephen (2013): Chart: 2/3rds of Global Solar PV Has Been Installed in the Last 2.5 Years. Online at http://www.greentechmedia.com/articles/read/chart-2-3rds-of-global-solar-pv-has-been-connected-in-the-last-2.5-years, last accessed 27 November 2013.

⁶⁵ Channell, Jason; Lam, Timothy; Pourreza, Shahriar (2012): Shale & renewables: a symbiotic relationship. Citi Research. Online at https://ir.citi.com/586mD+JRxPXd2OOZC6jt0ZhijqcxXiPTw4Ha0Q9dAjUW0gFnCIUTTA==, last accessed 25 June 2013.

Watanabe, Chisaki (2013): Japan Set to Overtake Germany as World's Largest Solar Market. Online at http://www.bloomberg.com/news/2013-06-04/japan-set-to-overtake-germany-as-world-s-largest-solar-market.html, last accessed 27 November 2013.

Japan reverses Copenhagen pledge, widens global emissions gap, nuclear shutdown not to blame – Climate Action Tracker. Online at http://climateactiontracker.org/news/147/Japan-reverses-Copenhagen-pledge-widens-global-emissions-gap-nuclear-shutdown-not-to-blame.html, last accessed 26 November 2013.

⁶⁹ Yuen, Anthony, et al. (2013): The Unimaginable: Peak Coal in China. 4 September 2013. Online at https://ir.citi.com/z5yk080HEXZtolax1EnHssv%2Bzm4Pc8GALpLbF2Ysb%2Fl21vGjprPCVQ%3D%3D, last accessed 26 November 2013.

days.⁷⁰ Another recent study concluded that 500 million people in Northern parts of China have a 5.5 year lower life expectancy (which amounts to in total 2.5 billion life years lost) than their Southern compatriots due to higher air pollution from coal combustion, which is 55% higher than in Southern China.⁷¹

Fifth, much of the discussion is being dominated by fears of carbon leakage. The question is, however, what percentage of emissions is actually exposed to this risk? Is transport going to be relocated if some countries pursue stringent climate policy and other countries do not? Are buildings going to be relocated? Are power plants, waste, agriculture and forestry going to be? And even in industry most sectors are either not emission intensive or not strongly exposed to international competition.⁷² Nevertheless, overall climate ambition is being substantially held back by concern about a rather minor share of overall emissions.

Emission reduction policies hence also provide strong immediate benefits to society. Whether the net macroeconomic impact will be positive or negative at the very least seems to be an open question. It may well be that "the current world energy system (and with it the entire, fossil fuel-based world economy) is situated in a "local sub-optimum" – as a sled is stuck in a local hollow, which is separated from a deep valley (the "global optimum") only by a short and relatively gently rising slope. If one exerts a minor extra effort to push the sled across the slope, the vehicle can get moving rapidly! The energy transition needs exactly this push from governments – in the long term the extrainvestment will pay off double, triple and manifold."⁷³

The above-mentioned finding that energy subsidies mostly benefit wealthy rather than poor households points to where the probably more pertinent problem lies: Climate policy is essentially economic policy and will have substantial distributional impacts. While at the macro level benefits may well outweigh negative impacts even without taking into account climate damages, at the micro level there will be losers as well as winners, which naturally engenders resistance. Companies and entire sectors that have so far based their business models on the use of fossil fuels will either have to fundamentally restructure, or be replaced by others that provide the same societal

Preiss, Philipp, Roos, Joachim, Friedrich, Rainer (2013): Assessment of Health Impacts of Coal Fired Power Stations in Europe. Stuttgart University, Institute for Energy Economics and the Rational Use of Energy (IER) and Department for Technology Assessment and Environment (TFU). Online at http://www.uni-

stuttgart.de/hkom/presseservice/pressemitteilungen/2013/130405_Deliverable_IER_to_GREENPEAC E_DE.pdf, last accessed 22 August 2013.

⁷¹ Chen, Yuyu, Ebenstein, Avraham, Greenstone, Michael, Li, Hongbi (2013): Evidence on the impact of sustained exposure to air pollution on life expectancy from China's Huai River policy. PNAS Early Edition. Online at http://www.pnas.org/content/early/2013/07/03/1300018110, last accessed 22 August 2013.

For the EU, see e.g., Graichen, Verena; Schumacher, Katja, Matthes, Felix Chr.; Mohr, Lennart; Duscha, Vicky; Schleich, Joachim; Diekmann, Jochen (2008): Impacts of the EU Emissions Trading Scheme on the industrial competitiveness in Germany. Dessau-Roßlau: Federal Environment Agency (Umweltbundesamt).

Rahmstorf, Stefan / Schellnhuber, Hans Joachim (2006). Der Klimawandel. Diagnose, Prognose, Therapie. München: Beck, p. 114, translated from the original German by the authors.

service in a low-emission manner. According to the recent IEA special report, net revenues for existing nuclear and renewables-based power plants would be boosted by US\$1.8 trillion (in year-2011 dollars) through to 2035 in the 450 Scenario, while the revenues from existing coal-fired plants would decline by a similar level. 8% of new fossil-fuelled plants would be retired before their investment is fully recovered.⁷⁴

Pursuing a 2°C compatible climate policy would also strongly devalue the majority of global fossil fuel reserves. According to the IEA and others, at least 2/3 of global fossil fuel reserves will need to remain untouched if the 2°C target is to be met. However, these reserves are already on companies' books. Analysis by HSBC concluded that if adequate policies to achieve the 2°C target were introduced, this could strip as much as 60% of the market value off fossil fuel companies.⁷⁵

Those who stand to lose from the low-carbon transition have so far managed to dominate the political narrative while the innovation impulses and new markets created by climate policy have so far not received adequate attention. This narrative will need to be turned from its head on its feet if climate policy is ever to get where it needs to be going.

13.2 Pioneers Needed

However, the increasing piles of studies that show that ditching fossil fuel use is feasible and yields multiple benefits for economic well-being are obviously not sufficient to persuade a majority of people. Mental infrastructures are apparently as difficult to change as physical infrastructure. Most people will likely only become convinced of the viability of going low-carbon if they see it in practice.

Pioneers showing that it is possible are hence critical. This could help creating a virtuous cycle where the international process serves to keep the climate issue on the agenda and at the same time catalyses bottom-up processes, which then in turn inject further momentum into the international process. Ambitious action by frontrunners also induces technological learning, which makes it easier for others to follow. For example, the strong promotion of renewables by Denmark, Germany and other countries have induced massive cost reductions. The most striking case is solar PV where for each doubling of globally installed capacity the costs have dropped by 22%. And as noted above these trends are set to continue and analysts expect that both wind and solar will be fully competitive with other energy sources in most parts of the world by 2020

Mobilising for leadership will require political engagements at all levels. Progress in climate policy will only be possible if sufficiently large pro-climate advocacy coalitions

⁷⁴ IEA (2012): World Energy Outlook 2012. Paris: OECD/IEA.

⁷⁵ Spedding, Paul, Mehta, Kirtan, Robbins, Nick (2013): Oil & carbon revisited. Value at risk from unburnable reserves. London: HSBC Bank plc.

can be brought together in the key countries and across borders to overcome the blocking power of incumbent industries whose business models rely on using fossil fuels. And while it is certainly not able to the save climate on its own, the international climate process can serve as a key catalyst for the national discussions. While Copenhagen did not produce the hoped-for treaty, the deadline imposed by the Copenhagen conference injected a significant momentum into national discussions. One country after another elaborated domestic targets and actions, and presented them to the international audience. The run-up to Copenhagen hence resulted in a much better understanding of national mitigation potentials, available policy options and actions that countries are prepared to take. This momentum would hardly have materialised without the positive pressure exerted by the Copenhagen deadline. And in keeping this momentum, emission reduction actions are getting implemented in many countries around the globe, even if far from the scale that is needed.⁷⁶

The run-up to 2015 must hence be seized as a catalyst to build national momentum. One key opportunity is the world leaders' summit on climate change UN Secretary General Ban Ki-moon will convene on 23 September 2014. Such a summit is exactly what some analysts have called for:

"The decisions required in 2015 will be momentous... These decisions are not within the powers of environment ministers, and they will not happen of their own accord. They require the direct engagement of heads of government, under the full glare of a summit spotlight. And that summit requires the kind of pressure that only the coordinated mobilization of global civil society — including the scientific community, businesses, non-governmental organizations and youth movements — can achieve."

13.3 Does the Climate Regime Need New Types of Mitigation Commitments?

Some analysts consider that a key factor in the framing of the narrative that emission reductions mean economic pain is how commitments are framed.

In general, commitments may be "obligations of result" or "obligations of conduct".⁷⁸ That is, commitments may refer to what countries are supposed to do or to what they are supposed to achieve. The World Trade Organisation is one example that prescribes desired behaviour rather than desired outcomes. The WTO does not prescribe how

⁷⁶ Jake Schmidt: Countries Acting at Home to Address Global Warming: The Key Fight Ahead. Online at http://www.huffingtonpost.com/jake-schmidt/countries-acting-at-home_b_2261222.html, last accessed 13 December 2012.

Nature comment article 12 January 2012 - Michael Jacobs. Online at http://www.michaeljacobs.org/nature-comment-article-12-january-2012.html, last accessed 13 December 2012.

Daniel Bodansky (2012): The Durban Platform: Issues and Options for a 2015 Agreement. Center for Climate and Energy Solutions.

much countries should trade, it prescribes what policies and measures countries should pursue and must not pursue in order to promote and not impede trade. The climate regime has so far been outcome-based, commitments in the Kyoto Protocol have been conceived of in terms of emission targets and there is a widespread sentiment that emission targets for developing countries would also be the most adequate approach to address climate change. This may be called a very "scientific" approach. As climate change is caused by the accumulation of greenhouse gas emissions in the atmosphere, it was concluded that policy should put a cap on emissions and ratchet that cap down over time. And ideally use this cap as a basis for an emission trading system, which would put a price on emissions and thus drive investments and innovation into low-emission alternatives.

However, arguably all political incentives point in the direction of setting weak rather than strong emission targets. There is hardly any country in the world where setting strong emission targets yields political rewards for politicians. To the contrary, as noted above emissions are seen by many decision makers as inextricably linked to economic well-being; framing commitments in terms of emission reductions therefore arguably directly triggers the perspective of seeing climate protection as an economic loss. This general tendency is compounded by the political influence of special interest groups who will indeed lose out from shifting economies away from emission-intensive business models.

In addition, it is in fact hardly possible for governments to credibly promise achievement of specific future emission levels as emissions are strongly influenced by factors such as economic and population growth which governments can at best influence indirectly, if at all. Technology choices are in many cases also not under the control of national policy as most countries are technology takers. These risks are especially pertinent for rapidly industrialising countries. Rapid industrialisation and urbanisation is in itself a challenge for reducing emissions. In addition, future emission levels are much more difficult to forecast in rapidly growing economies than in less rapidly growing ones.

In addition, turning the Earth's GHG absorption capacity into a commodity inevitably gives rise to controversy about who should receive what share of this commodity. One reason why quantitative commitments are contentious is because they are equivalent to giving countries money – lots of money. Stiglitz opines that, "If emissions were appropriately restricted, the value of emission rights would be a couple trillion dollars a year – no wonder that there is a squabble over who should get them." Countries thus have an incentive to keep their commitments as weak as possible in order to maximise the volume of sellable allowances.

⁷⁹ Stiglitz, Joseph (2010): Overcoming the Copenhagen Failure, 6 January 2010. Online at http://www.project-syndicate.org/commentary/overcoming-the-copenhagen-failure, last accessed 2 August 2013; see also Stiglitz, Joseph E. (2006): Making Globalization Work. New York / London: W W Norton & Co.

Moreover, the Kyoto approach effectively caps ambition. If a country overachieves its target, this yields no benefit to the atmosphere. Instead, the overachievement yields a surplus of emission allowances, which can be sold to others or banked to offset required emission reductions elsewhere or in the future. Which is exactly what is supposed to happen according to textbook theory, based on an assumption of adequate ambition, but in the real world this system rather serves to lock in insufficient levels of ambition.

The theoretical advantage of quantity commitments, that they provide clarity on the environmental outcome, therefore loses much of its lustre as in practice it has turned out to be near-impossible to set commitments at the required level, or indeed to set any commitments at all.

Finally, it may also be fundamentally sub-complex to see climate change solely through the lens of emissions as this frames climate change as an environmental problem. But arguably climate change is fundamentally a development problem, not a traditional environmental problem, so the traditional end-of-pipe approach to environmental regulation will arguably not do. Industrialised countries will have to fundamentally redevelop their economies and developing countries will have to develop fundamentally different from how industrialised countries have (mis-)developed.

Unfortunately, in the UNFCCC sustainable development has been relegated to the status of a "co-benefit" that is seen as nice to have but not strictly necessary. Which is fundamentally at odds with the priorities of developing countries, who clearly see development as their fundamental priority and emission reductions as a co-benefit. And while they are not as explicit about it, the same also applies to the traditional industrialised countries. When looking for example at the German Renewable Energy Act, it lists four objectives that are to be achieved. And only one of these relates to climate and the environment, the other three are immediate benefits the German legislator hopes to achieve: Reducing the long-term macro-economic cost of energy supply, preserving fossil energy resources and promoting technology development.⁸⁰

The climate regime would therefore profit from recognising that climate change is far from being the only rationale driving emission reduction policy and from turning the priorities around and framing commitments in a way that puts sustainable development benefits front and centre.

13.4 Considering Multi-Dimensional Commitments

The climate regime clearly needs a reference to emissions as these constitute the environmental problem that is supposed to be solved. However, as discussed above the

Erneuerbare-Energien-Gesetz vom 25. Oktober 2008 (BGBI. I S. 2074), das zuletzt durch Artikel 5 des Gesetzes vom 20. Dezember 2012 (BGBI. I S. 2730) geändert worden ist, Online at http://www.gesetze-im-internet.de/eeg_2009/, last accessed 3 December 2013.

Kyoto approach arguably has several weaknesses. Emission targets should not be tradable and bankable by governments to reduce the incentives to adopt weak commitments and to prevent targets from becoming a cap on ambition. Emission trading should only be pursued at the level of companies, for example in domestic emission trading systems, as companies actually make their trading and investment decisions on the basis of economic rather than political considerations.

In addition, emission targets should be complemented by other types of commitments that allow to marry development and climate aspirations and that are more in line with what governments can actually deliver: implement policies. Technology scale-up and energy efficiency improvements can be more directly influenced by government action than emissions and may dovetail with countries' and citizens' interests to promote certain technologies and energy security.

Multi-dimensional commitments would also reduce the risk of failure if the different components are not perceived as building blocks of one ambitious target but rather prescribe the same emission reductions from various perspectives. EU Climate Commissioner Hedegaard recently opined that having more than only a GHG target was "wise". "During the economic crisis we had more than one target and that has helped us a lot. Imagine if we had only had a CO₂ target and the ETS (Emissions Trading System) during this crisis. Would Europe have continued to have such a strong focus on energy efficiency and renewables? I don't believe it."⁸¹

Multi-dimensional commitments could for example relate to scale-up of certain technologies, economic inputs or certain policies. As for economic inputs, taking the example of energy-related CO₂ emissions, which account for about 60% of global emissions, these are determined by: size of the population, size of the economy, energy intensity of the economy and CO₂ intensity of energy supply. Economic and population trends are largely beyond the influence of governments and will anyway hardly be made subject of international agreements. Governments should therefore commit to reducing the energy intensity of the economy and reducing the CO₂ intensity of energy provision. 82

Some analysts argue that the climate regime should shift fully to a policy-based approach, taking as their model the WTO with its high level of detailed policy coordination.⁸³ However, while such an approach may have much to recommend it, it bears noting that the WTO also started out small, focusing mostly on tariffs, and took half a century to develop to its current status.

⁸¹ Quoted in: EurActiv.com, "Hedegaard: More 2030 climate targets would be 'wise'", 10 October 2013. Online at http://www.euractiv.com/energy/hedegaard-2030-climate-targets-w-news-530979, last accessed 29 November 2013.

Verbruggen, Aviel (2011): A Turbo Drive for the Global Reduction of Energy-Related CO₂ Emissions.
 See e.g. Victor, David (2011): Global Warming Gridlock. Creating More Effective Strategies for Protecting the Planet. Cambridge et al.: Cambridge University Press.

Nonetheless, there are key policy levers that recommend themselves for special attention. One is fossil fuel subsidies, which should be phased out by all countries as soon as possible. As noted above, according to the IEA global fossil fuel subsidies are currently six times the level of support received by renewable energy technologies and 15% of global CO₂ emissions effectively receive an incentive of US\$110 per tonne through fossil-fuel subsidies. Since the benefits from these subsidies are mostly captured by wealthy households, the social impacts of removing them should be manageable, but will nevertheless require attention. A win-win approach would be to redirect the resources that have so far gone into subsidies into supporting low-income households in upgrading the energy efficiency of their buildings, appliances and transport options.

In addition, governments should incorporate the costs of climate change into all government procurement decisions, in particular investment decisions on long-lived infrastructure. In infrastructure planning in developing countries that is done on behalf of development agencies, the usual method of valuation in feasibility studies is to include damage costs into the shadow pricing procedure. That is, instead of market prices, investment decisions are based on a shadow price that includes all territorial and exterritorial externalities that will be caused by the investment, as the otherwise neglected external effects have to be paid by the inhabitants of the state. This kind of decision-making should not only apply to developing countries which need the support of international development banks. It should be generally recommended as standard governmental procedure, including in industrialised countries, as the rational of this procedure does also hold for them. One further benefit would be that negative income effects for society as a whole as result of external effects could be avoided.

Parties should ideally also commit to limiting fossil fuel extraction. As noted above, analysis by the IEA and others suggests that to achieve 2°C at least 2/3 of global fossil fuel reserves will need to be left untouched. But currently the same governments that are trying to reduce fossil fuel use are at the same time still promoting the maximum possible exploitation of fossil fuel reserves and are often even shareholders of the resource extracting companies.

It would be desirable to agree on a list of commitment types that would be mandatory for all countries. However, such an approach is for the time being probably beyond what is politically possible, given that many countries have been defensive or even openly hostile against having any kind of international processes determine or assess what they should do. As a result, as noted the latest ADP decision stipulates that "contributions" will be "nationally determined".

Nonetheless, countries should at least be strongly encouraged to think about the future climate regime more multi-dimensionally than only in terms of GHGs. Taking a multi-dimensional approach to commitments could well build on what is already taking place

under the UNFCCC. Many developing countries have made multi-dimensional Copenhagen/Cancún pledges, the same may be the case for their 2015 contributions.

In addition, there is a plethora of policy and action-based initiatives under development. The NAMAs that are currently being developed all have direct sustainable development benefits front and centre. Other examples are the attempts to regulate HFCs under the Montreal Protocol, the Climate and Clean Air Coalition, the G-20 process to address fossil fuel subsidies and the new Initiative for Sustainable Forest Landscapes. The "Renewables Club" founded by Germany, France, the United Kingdom, Denmark, Morocco, South Africa, China, Tonga, United Arab Emirates and India could also be a vehicle to push forward concrete action, but so far it has rather been lacking in substance.

International climate policy may thus incrementally expand its scope to better marry countries' development and climate objectives than it has done so far.